

Patent Claims

1. A measurement device (5) for linear, non-contacting recording of the position of a variable-position object having a field device (6), which is rigidly connected to the object, produces a magnetic field and is deflected (x), corresponding to the change in the position of the object, from a reference position (x_0) along a measurement path (2), characterized in that the measurement path (2) is formed by a track (3) which is in the form of a strip and has magnetoresistive characteristics, which track (3) makes contact on each of its two opposite longitudinal faces with a resistance track (4a, 4b) composed of normal resistive material, with the normal resistive material being provided at the ends of the measurement path (2) with connections (A to D), between which measurement signals which are correlated with the position (x) of the field device (6) can be tapped off.
2. The device as claimed in claim 1, characterized in that the track (3) which is in the form of a strip and has magnetoresistive characteristics has a magnetoresistive layer system corresponding to an XMR or CMR element.
3. The device as claimed in claim 1, characterized in that the track (3) which is in the form of a strip and has magnetoresistive characteristics contains a layer with a granular magnetoresistive material.
4. The device as claimed in claim 1, characterized in that the track (3) which is in the form of a strip and has magnetoresistive characteristics has a layer which is formed from a suspension of particles with those characteristics.
5. The device as claimed in one of the preceding claims, characterized in that the two longitudinal-face resistance tracks (4a, 4b) extend over the entire linear extent (L) of the measurement path (2).

6. The device as claimed in one of the preceding claims, characterized by the measurement path (2) having a linear extent (L) of more than 0.5 cm.